TECHNICAL REPORT NO. UKR-4

Improving Efficiency, Quality and Access under Global Budgeting at City Hospital Number One L'viv, Ukraine

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ACRONYMS

ALOS	Average length of stay
CH1	City Hospital Number One
ENT	Ear, nose, and throat Services
HMO	Health maintenance organization
IDS	Intensive demonstration site
LOS	Length of stay
ZRP	Zdrav*Reform* Project

ACKNOWLEDGMENTS

Officials of the L'viv Oblast and L'viv City Health Administrations provided invaluable support for this activity. The team would especially like to thank the staff of City Hospital Number One, particularly Dr. Jemma Jafarova and Mrs. Svetlana Bichenko and their senior staff, for the time and effort they gave so generously in explaining the operation of City Hospital Number One. Any errors or omissions in this report are solely those of the authors and should not be attributed to any of the aforementioned people.

EXECUTIVE SUMMARY

City Hospital Number One (CH1) is one of four pilot facilities selected for technical assistance as part of Zdrav*Reform*'s L'viv, Ukraine Intensive Demonstration Site (IDS). CH1 has five main institutions: a 290-bed inpatient hospital, two children's and two adult polyclinics. In addition, it runs two family health centers and a maternal and child health program. City Hospital Number One has a dual mission: to provide basic inpatient and outpatient health services to the population of Shevchenko district, a population of about 150,000, and to provide certain specialized inpatient services for the entire city of L'viv (about 0.8 million population). The latter include vascular surgery; ear, nose, and throat (ENT) services; and allergy treatments.

In the near future, City Hospital Number One is expected to become an experimental site for the city health administration's proposed new budget policy, which changes existing allocations from a line item-based to a per capita-based global budgeting system. This report presents a strategic plan to guide the operations of City Hospital Number One under this new payment system. In particular, the objectives of these field activities were to:

- support the L'viv City Health Administration in its goal of providing health facility managers with control of their budgets, thereby to improve the efficiency and quality of health care provision and to increase resources available for primary care;
- provide technical assistance and training to City Hospital Number One for its experiment in global budgeting;
- to introduce senior management at City Hospital Number One and key officials at the City Health Administration to concepts and techniques related to global budgeting;
- assist City Hospital Number One and the City Health Administration in evaluating the results of the budgeting experiment.

City Hospital Number One and its four polyclinics operate under unified management. They also are financially linked under a single budget, but they still function quite independently of each other.

The lack of integration of services is clearly a result of existing financial incentives that reward hospitals based on the number of beds and bed-days and reward polyclinics based on the number of visits. In spite of the difficult economic circumstances that all Ukrainian health facilities have faced during the past few years—e.g., hyperinflation, social sector budget cuts of up to 50 percent and few incentives that would reward efficient delivery of services—the managers of City Hospital Number One have nevertheless introduced some impressive innovations. These include:

- Implementation of performance-based salary bonuses for teams of health professionals
- Establishment of two family medicine centers in rural areas
- Establishment of a maternal and child health program
- Implementation of rotational service across inpatient and outpatient departments for doctors providing ENT services
- Computerization, although limited, of primary health care population records

- Establishment of user fee contracts with several local enterprises for provision of annual employee check-ups

The city has delayed implementation of the proposed per capita-based global budget policy until the economic situation stabilizes. Under the new policy, the city government would allocate funds to L'viv's eight municipal hospitals and two municipal polyclinics after funding specialized facilities according to a budget-neutral per capita formula based on demographic data obtained from the former Soviet Union. The age/sex characteristics of the residential population in which the facilities are located would provide the primary basis for the new calculations. Eventually, per capita budget allocations would be complemented by a system of interfacility payments that would deal with situations in which patients chose to use facilities outside of their residential area. As part of the experiment, City Hospital Number One would likely obtain substantial autonomy in deciding how to use its funds. Since more than 96 percent of its funds come from city government, this budgetary change could have a dramatic impact on City Hospital Number One. At present only 4 percent of the hospital's budget is generated through user fees and humanitarian assistance.

The strategic plan for City Hospital Number One outlined in this report contains two sets of recommendations: financial and operational. The former cover issues related to the proposed per capita-based budget policy; opportunities for introducing user fees; and budget and cost management. The latter focus on organizational changes, information systems, clinical protocols, incentive systems and bed planning. Each recommendation is summarized below (the numbering reflects the section in the main text):

Recommendations: Financial Issues

Per Capita Global Budgets (6.1): The adoption of a per capita-based global budget policy is an important step towards providing more financial and management autonomy to City Hospital Number One, a move that is critical to enhancing the efficiency and effectiveness of its health care service delivery. It is also critically important that, along with the new payment system, City Hospital Number One be given substantial flexibility in how it can use these funds. Two aspects of the proposed new budget formula should be carefully examined in the near future. First, because City Hospital Number One serves both the Shevchenko rayon and the entire city, defining the population on which to base the formula is problematic. Among other things, a system of interfacility payments will be necessary to fund patients who move across geographic areas. The bottom line is that CH1 may have to reassess the financial viability of its dual mission. Second, it would be useful to review the budget formula in terms of the types of services provided by each of the hospital's five health facilities, rather than depending only on relative weights which correspond to comprehensive services for each age and sex group.

User Fees (6.2): In light of diminishing public budgets in Ukraine, it is critical that City Hospital Number One diversify its sources of funding through enterprise contracts and other types of user fees. Efforts to promote user fees could focus on those services that (a) are demanded by individuals and enterprises are able and willing to pay for quality services, (b) require minimum start-up costs

for quality improvements, (c) can, at a minimum, have a price above variable costs, and (d) encourage cost-effective use of outpatient services and discourage inefficient use of inpatient services. Several recommendations for implementing user fees are given in this section.

Budget and Cost Management (6.3): City Hospital Number One and each of its four polyclinics should establish distinct, but integrated, budget and cost accounting systems. Senior management should be trained in how to effectively use such information to support their daily and strategic decision making. Since the hospital's current computer system is relatively primitive, however, additional computer hardware and software should be aggressively sought and put on line as soon as possible.

Recommendations: Internal Organization and Management

Organizational Readiness (7.1): Under global budgeting, it will be important for City Hospital Number One to continue to improve the efficiency and effectiveness with which it treats patients. To this end, it will be necessary to reduce the number of acute patient intakes and make greater use of outpatient treatment settings and family medicine practitioners. In addition, a clear corporate policy should be promulgated that makes integration of inpatient and outpatient services a critical objective. Operational and financial targets should be used to monitor integration of inpatient and outpatient services.

Managerial Readiness—Information Systems (7.2.1): Senior management staff would benefit from training that would enable them to determine what kinds of information they will need to: (a) guide them in their daily and strategic decision making, and (b) train mid-level managers to provide such information in an accurate and timely manner. Information systems should include both financial and clinical data. Inpatient and outpatient records should include basic minimum data according to international standards. Staff should be trained to use these new information systems. Computerization of the new systems would be highly desirable.

Managerial Readiness—Clinical Protocols (7.2.2): Establishing clinical protocols; i.e., suggested courses of treatment for particular types of patients, would be a useful tool for identifying cases that could be shifted from an inpatient to an outpatient setting. Such protocols should include criteria for admission to and discharge from inpatient units. On the outpatient level, they should specify conditions for referring patients to other outpatient specialists or other inpatient services. They should include an initial list of surgeries to be done on an outpatient basis. These protocols could guide decisions about additional investments and training that would be necessary to expand outpatient services.

Managerial Readiness—Incentive Systems (7.2.3): The performance-based salary bonus system for teams of health professionals should be expanded to all employees. Management should consider offering such bonuses only after a minimum level of productivity has been achieved. Management might also consider using the incentive program to explore how it could be used to encourage more extensive use of outpatient services, when appropriate.

Managerial Readiness—Bed Planning (7.2.4): City Hospital Number One would benefit from efforts to establish and implement an organizational structure for classifying hospital beds according to types of patients and their needs. Associated admissions criteria and levels of nursing care should be developed. Attention should be given to estimating costs per bed type.

Chapter 1

ASSIGNMENT BACKGROUND

The Zdrav*Reform* Program (ZRP) was introduced to Ukraine in July 1994. At that time, senior project staff met with Ministry of Health officials and visited four oblasts to assess them as potential intensive demonstration sites. As a result of this initial visit, three rapid response activities were identified: (1) an evaluation of an innovative hospital payment method in Drohobych; (2) a cost-effective analysis of a pregnancy screening program using sonograms in Chernivisty; and (3) an evaluation of a self-financing program of the Family Health Center in Odessa. Following these rapid response activities, the overall strategy for Zdrav*Reform* in Ukraine was designed.

1.1 Intensive Demonstration Site Planning Activity

The strategic plan for Zdrav*Reform* in Ukraine has three parts: national activities and intensive demonstration sites (IDS) in Odessa and L'viv. Two teams of ZRP consultants and local counterparts worked with local officials and decision makers in L'viv and Odessa in February–March 1995 to set the objectives for each of the intensive demonstration sites for the 21 month period from April 1995 through December 1996. The intensive demonstration sites serve as areas where comprehensive and integrated market-oriented reforms are devised and tested with Zdrav*Reform* assistance.

The L'viv IDS activities include oblast-wide activities related to establishing per capita-based budgets and initiating development of patient classification systems; rayon-level planning of essential health services in Skolie and Zhovkva; facility-level experiments in establishing private practice; and four pilot facility activities improving health care business skills and expanding user fees as a funding mechanism. City Hospital Number One, in the city of L'viv, was selected as one of the four pilot facilities. Because the city health administration plans in the near future to switch payment of most of its health facilities from the traditional line-item budgeting to a new per capita-based global budgeting system, technical assistance was provided to City Hospital Number One to prepare a strategic plan for operating under global budgeting. Those activities are the subject of this report.

1.2 Objectives

The objectives of this field activity are fourfold: (1) to support the L'viv City Health Administration in its goal of providing health facility managers with greater control of their budgets, and thereby to improve the efficiency and quality of health care provision, and to increase resources available for primary care; (2) to provide technical assistance and training for an experiment in global budgeting to be conducted at City Hospital Number One and its associated polyclinics; (3) to introduce senior management at City Hospital Number One and key officials at the city and oblast health departments to concepts and techniques related to global budgets and related capitation payments; and (4) to assist the City Health Department in evaluating the results of the experiment at City Hospital

Number One and in deciding whether and how to expand global budgeting to other city health care facilities.

1.3 Methods

The above objectives were met primarily by preparing a business plan for City Hospital Number One that provides a basic description of its situation; examines the readiness of City Hospital Number One and associated polyclinics to function under the new per capita global budgeting system; and recommends changes in organization, management and financing to cope with the new payment system. This document will provide guidance for future technical assistance by ZRP and will provide base line information for evaluating the progress of City Hospital Number One and the impacts of the new payment methods.

The business plan was based on: (1) in-depth interviews with city and health facility officials; (2) data collection and analysis of budget, utilization and demographic data; and (3) five one-hour training sessions on topics related to preparing a strategic plan for City Hospital Number One.

The report begins with a description of City Hospital Number One, including its physical, management and organizational structure; trends in utilization; and an explanation of recent innovative practices. This is followed by a discussion of the characteristics of the health care market and community in which CH1 operates. Next, the hospital's financial environment is presented, including a review of budgets; sources of revenue; and a description of the proposed per capita-based global budgeting system. The last two chapters give our recommendations concerning financial aspects and internal management operations.

Chapter 2

FACILITY DESCRIPTION

2.1 Infrastructure

City Hospital Number One encompasses five main institutions: a 290-bed inpatient hospital, two children's polyclinics and two adult polyclinics. In addition, CH1 runs two family health centers, 33 health clinics in enterprises, and seven health clinics in schools. CH1 has also recently established a maternal and child health center. The combined staff for these facilities is officially 1,410.5 (1994) with 344 doctors, 687.5 nurses, 260 attendants, and 119 administrative, grounds and other personnel. Approximately 1,100 of these positions are filled. The official list of personnel is down from 1440.5 in 1992 when the inpatient children's department was transferred to the Children's City Hospital. This system of medical facilities is responsible for a population of approximately 150,000 in Shevchenko, one of five city rayons in L'viv. In the near future, City Hospital Number One will eliminate 60 beds (about 10 in each department) in response to the upcoming budget cuts. A summary of the physical infrastructure is given in Table 1.

The inpatient facility has five departments including internal medicine, gynecology, vascular surgery, allergies, and ENT. The latter three serve the entire city (0.8 million people), while the first two serve the Shevchenko rayon only. Between 1992 and 1993, CH1 closed its 40-bed pediatric after a new Children's City Hospital was built. The polyclinics, which are very similar in the types of services they offer, are responsible for covering different portions of the Shevchenko population.

Compared to the American health care system, the Ukrainian health care system uses fewer staff but more physicians. For example, the average American hospital has 4.5 employees per occupied bed, whereas City Hospital Number One has just over one per bed. Part of the disparity can be explained by differences in the use of technology in the two systems, part by the concentration of technology in American hospitals. The latter focus on high acuity level patients; most other patients are in other beds in other institutions. Ukrainian hospitals, by contrast, contain almost all the beds in the system and therefore almost all the patients. Much of the disparity in physician numbers is explained by differences in the work done by physicians in the two countries and the extensive use of "physician extenders" in America.

Table 1
City Hospital Number One: Basic Structure, 1994

	Hospital	Children's Polyclinic #1	Children's Polyclinic #2	Adult Polyclinic #1	Adult Polyclinic #2	Family Health Centers (2)	Enterprise & school clinics (40)
Beds:	290	0	0	39	35	0	0
Int. Medicine	60						
Gynecology	60						
Surgery	60						
ENT	50						
Allergies	60						
day beds	55			39	35		
Staff *	351	116.5	135	283.5	387	6	72
doctors	31	42.5	45	88	116	6	0
nurses	104	62.5	71	145.5	207.5		72
attendants	92	12	19	50	64.5		
administration	124						
(housekeeping)	(90)						
Population (est.)	146,500					10,000	varies
Adults	115,000	0	0	45,000	70,000	(1,500	
Children< 15 yrs	31,500	15,000	16,500	0	0	per	
						doctor)	

* Not all positions filled. Staff figures are approximate. Complete listing should include 1,410.5

2.2 Management and Organizational Structure

City Hospital Number One is owned by the city of L'viv, but is expected to obtain independent legal status when per capita global budgeting is instituted. This new legal status will give hospital administrators more flexibility in deciding how to use their limited funds. The basic organizational structure of City Hospital Number One will remain the same: the Chief Doctor, assisted by the Chief Economist, and the Medical Director, will still oversee the inpatient unit and all four polyclinics. The three top managers will in turn be supported by the heads of the polyclinics and the heads of the clinical departments who have responsibility for overseeing day-to-day (nonfinancial) operations. The Chief Doctor is a quasi-political post; he or she is appointed by the L'viv City Administration with approval by the senior hospital staff. The five institutions operate under one budget, which is controlled and administered by the Chief Doctor and Chief Economist. Heads of polyclinics do not have their own budgets.

Although these five institutions operate under unified management and are financially linked, operationally they are independent of each other. As a result, there is a lack of continuity of care for patients who must move between polyclinics and the inpatient of CH1; and, similarly, there is little coordination between hospital and polyclinic doctors. When patients' illnesses are not severe, they

visit their designated district health doctor in the nearest polyclinic. Most are not referred to specialists, but those who subsequently visit either specialists in the polyclinic or CH1's inpatient department must have a referral slip. Patients are free to choose their own specialist, either at CH1 or some other institution. However, the district health doctor generally does no follow-ups to ensure continuity of care.

The current lack of integration between inpatient and outpatient services is clearly a response to the existing financial incentives. In Ukraine, hospital budgets are overwhelmingly based upon bed supply. In order to ensure maximum payments, bed occupancy must be reasonably close to 100 percent. Since bed occupancy is within the control of the hospital, the goal is usually reached. Moreover, a secondary incentive is to fill these beds with patients who require a minimum of resources. As a result, the question, "Does this patient really belong here or can he be treated on an ambulatory basis?" is rarely asked.

Polyclinics have a similar financial set-up. Their budget assessments are based on the total number of patient visits. Thus, polyclinic physicians have little incentive to treat patients rather than to refer them to a specialist or to recommend hospitalization.

In early 1995, the ENT services component of Polyclinic #2 began an experiment to integrate services in the inpatient and outpatient departments. Under this experiment, both departments have been placed under one chief doctor. Polyclinic physicians continue to assist with the care of their patients who have been referred for inpatient surgery. Previously, polyclinic doctors could not work in the hospital, nor could hospital doctors work in the polyclinic. This 'rotational service' has been proposed for all of the hospital's inpatient and outpatient surgery departments, but the plan has met with some resistance among staff physicians and has not yet been implemented.

The potential for improved integration of inpatient and outpatient surgery clearly exists, since according to senior surgeons, about 75 percent of those surgeries performed on an inpatient basis could be performed in the polyclinics without harm to the patients. Based on the American health care system model, surgery represents one of the more promising areas for realigning inpatient and ambulatory efforts. According to senior management 'rotational service' should improve the efficiency in the delivery of services and enhance the skills of polyclinic physicians who now have an opportunity to participate in more complex procedures.

During the past year, CH1's senior management has also introduced a performance-based salary bonus system. The hospital has been among the oblast's (or republic's) leaders in adopting this "work team" concept. Under this scheme, employees in a unit are evaluated by their supervisor in terms of quantity and quality of work. The evaluation is used to distribute to outstanding team members bonuses that are derived from salaries remaining from unfilled posts. There are 30 work teams, but some units are excluded from participating because they do not have the unfilled positions required to fund the bonus plan. Nevertheless, the concept seems to be generally well liked and successful.

To improve the management information system, City Hospital Number One has recently obtained a computer for its Family Medicine Practice. Staff are currently entering basic demographic and health care facility utilization data for the population covered by the family medicine program. Although no analysis of these data has been performed, the software currently being used by the hospital provides analysis capabilities.

2.3 Trends in Service Utilization

As shown in Figure 1, the number of beds decreased by 70 (19 percent) between 1992 and 1994, while the number of bed-days decreased by 11 percent. The number of discharges, presented in Figure 2, stayed about the same in 1994 as it was in 1992; however, it dropped temporarily in 1993. Not surprisingly, the actual occupancy rates during 1993 and 1994 stayed above 95 percent. Still, except for the ENT department, Average Length of Stay (ALOS) at the hospital fell in 1994. Figure 3 shows that ALOS fell from 15.1 days to 13.0 days. The number of polyclinic visits has remained stable during the past three years as shown in Figure 4, while the number of outpatient surgeries performed in polyclinics has declined. Figure 5 indicates that polyclinic ENT surgeries have steadily declined. It will be interesting to see if the introduction of rotational service in early 1995 will reverse this trend. Details of inpatient and outpatients service statistics taken from City Hospital Number One's annual reports are provided in Annex B.

Figure 1
City Hospital Number One- Beds

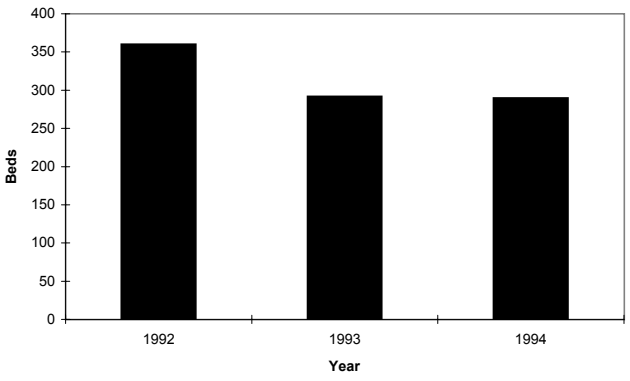


Figure 2
City Hospital Number One - Discharges
(official facility records)

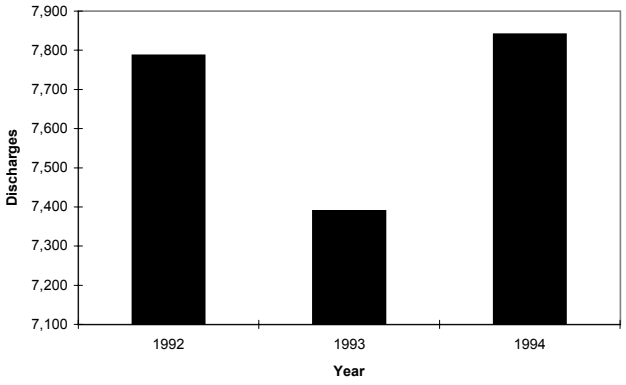


Figure 3
City Hospital Number One - ALOS
(official facility records)

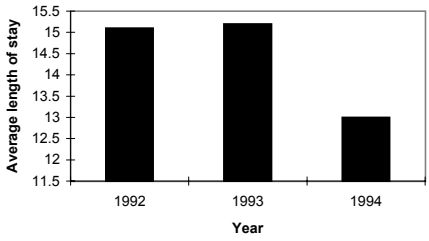


Figure 4
City Hospital Number One Polyclinic Visits

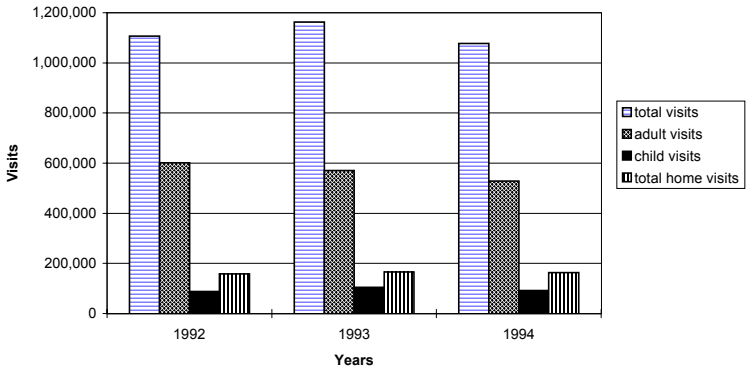
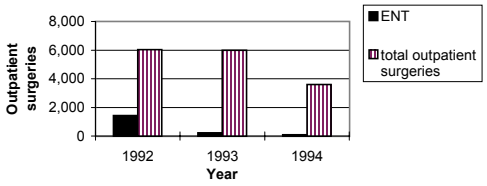


Figure 5
City Hospital Number One Polyclinic
Surgeries



Chapter 3

MARKET AREA AND COMMUNITY

City Hospital Number One has a dual mission: to provide basic inpatient and outpatient health services to the population of L'viv's Shevchenko rayon; and to provide certain specialized inpatient services to the entire city of L'viv, including vascular surgery, ENT, and allergy treatments.

3.1 Market Structure

The city of L'viv is divided into five wedge-shaped rayons, which are roughly equal in size and converge near the city center. Shevchenko is the northernmost rayon. It occupies a wedge from about 11:00 to 2:00 on a clockface, and it is about 20 kilometers from top to bottom—its largest dimension. CH1's inpatient unit serves the entire rayon. The four polyclinics, two adult and two pediatric, have specified subrayon catchment areas.

There are other specialized inpatient hospitals in the rayon that serve the entire city or oblast, including a large emergency hospital, an oncology hospital, a psychiatric hospital, and a pulmonary hospital. A citywide children's hospital also serves Shevchenko. A regional hospital in L'viv provides tertiary care to the entire region (oblast) of 2.7 million, and hospitals with a dual mission similar to City Hospital Number One are located in the other four rayons of L'viv. There is a small hospital and polyclinic (City Hospital #7) at the other end of the district. A complete list of city health facilities is given in Annex C. In addition, Ukrainians in theory are free to choose their medical provider; and because of geographic peculiarities, an estimated 20,000 citizens from outside Shevchenko rayon routinely use the polyclinics of City Hospital Number One.

As a result of these cross-flows, it is estimated that no more than half the budget of City Hospital Number One is spent on residents of Shevchenko rayon and, conversely, at least half the health services provided to rayon inhabitants draw on some other institutional budget.

There is not much private activity in the health sector in L'viv. Still, one entrepreneur is building a private, fee-for-service clinic and hospital just across the boundary of Shevchenko rayon.

3.2 Community Characteristics

According to official estimates, the population of Shevchenko in 1994 was 149,000. Hospital management believes this estimate is about 15 percent below the actual population level, primarily because of failure to account for the inhabitants of newer apartment buildings. However, population growth in the rayon fell last year to 0.5 percent, down from a 3.1 percent growth rate just two years earlier.

Shevchenko's population has a "normal" age distribution, with 10 percent of inhabitants aged 65 or older. Children under 14 account for 21 percent of the population; working age residents make up about 54 percent; and disabled persons account for just over one percent (1.1 percent).

The most remarkable feature of this demographic snapshot is the absence of men in the 30 to 44 year-old age bracket (only about four out of ten residents are male). The only explanation advanced by Ukrainian health officials and physicians was that the low number of males in this age group could be due to the ravages of alcohol, which, if true, would be stunning.

In general, the leading causes of mortality in the rayon are cardiovascular diseases (57.7 percent), oncology (15 percent), traumas and poisoning (13 percent), respiratory diseases (6.1 percent), gastrointestinal diseases (4.6 percent) and other (3.6 percent).

Shevchenko rayon contains much industry and is home to many of the workers. Present economic circumstances have diminished purchasing power, except among perhaps 5–15 percent of the population.

Chapter 4

BUDGETS AND SOURCES OF FUNDS

4.1 Flow of Funds

Before 1993, funds for health care services in L'viv city came from the National Ministry of Health, which funneled them first through the L'viv Oblast Health Administration and then the City Health Administration. In 1993, this changed when a new law was passed requiring that local taxes constitute a major source of local health care funding. (Some funds are still provided from the national level.) Fixed percentages of their income tax, sales tax and other taxes paid by L'viv city residents and enterprises are now kept at the city level to pay for various services, including health care services, while remaining portions are sent to the oblast and the national government. There are no district governments and therefore no district-level health administrations. Funds from the city health administration flow directly to each of the city's municipal health facilities. The overall city health budget is set by the City Rada (Council).

Along with the changes in the flow of funds implemented in 1993, some of L'viv's health care facilities, such as City Hospital Number One, were transferred from the authority and budget of the oblast to the authority and budget of the City Health Administration. By contrast, other municipal facilities, such as the Emergency Hospital and the Infectious Disease Hospital, are currently in the process of being transferred from the city to the oblast level because most of their patients come from outside the city. In the near future, selected health care facilities that are located in enterprises and that are funded by the City Health Administration will probably be transferred to enterprise budgets, although they may still be managed by city hospitals.

4.2 Revenue and Budget Trends

In 1993, more than 94 percent of cash funds for City Hospital Number One came from the public budget. In 1994 this figure rose to 99 percent. (Information on sources of revenue is provided in Annex D). Some additional funds come from contracts with enterprises and some from humanitarian groups. The budget figures for City Hospital Number One reflect the combined activities of the hospital and the four polyclinics; separate budget information for each polyclinic is not available.

Because of hyperinflation during the past two years, it is difficult to track real budget changes for City Hospital Number One, but it is clear from the deteriorating physical plant and dwindling stocks of supplies that real budgets have decreased. Current budget reductions are due, in part, to International Monetary Fund (IMF) lending requirements that called for a 30-percent budget cut in funded social services in 1994 and a 50-percent reduction this year.

City health officials propose to meet the required budget cuts first by reducing the number of beds and eventually by cutting staff, although it is not clear when such staff reductions will occur. City

Hospital Number One will likely close 60 beds in the next few months (some of which may be reclassified as day beds).

During the past two years, budget allocations have shifted slightly substantially away from salaries to medicine and nutrition. Salaries dropped from 55 percent to 34 percent of the budget; medicine increased from 8 percent to 25 percent; and nutrition doubled to 10 percent. These changes occurred primarily because of rising prices of medicines and foodstuffs. (Budget information is provided in Annex E). Taking such changes into account, policymakers have made utilities, salaries, food and medications, respectively, their highest priorities. Not long ago, salary was the number one funding priority, followed by food, medications, and, finally, utilities.

4.3 User Fees: Current Situation

CH1 is energetically attempting to diversify its funding base, but it first must overcome two major obstacles. The first is a lack of start-up funds to make improvements in quality that are needed to attract paying patients. For example, certain critical equipment should be purchased; walls should be painted; and medicine inventories should be stocked. The second obstacle is the need for approval of prices and fees from the city and/or oblast health administrations. It is not clear which level of health administration provides such approval. City Hospital Number One has already submitted price lists to both health administrations, but no response appears imminent.

CH1's current main source of outside funding is public enterprise contracts. Enterprises are viewed as important, though somewhat uncertain, funding sources under the current economic situation. Enterprises are required by law to provide workers employed in hazardous occupations with annual preventive exams. City Hospital Number One sent letters to a number of local enterprises offering to do these annual check-ups for a negotiated price. (The enterprises pay for these exams either through budget transfers or in-kind payments.) As of May 1995, 15 contracts had been signed, but only eight of the enterprises had paid for services.

The hospital director has appointed a senior staff member to supervise and monitor future fee-for-service activities. Although CH1's general objective is to thereby generate additional funds, it also is attempting to solidify its future market base under conditions of patient choice of provider.

Proposals for expanding user fees include provision of additional services and tests for enterprise employees, specialized gynecological services, massages, maternal and child health services, cosmetic surgery, and assistance to families caring for elderly individuals in the form of daily care (e.g., care provided while families are on vacation). In the case of cosmetic surgery, the proposal is to make an arrangement with a well-known cosmetic surgeon to deliver his services at the hospital. He would receive payment for his services, while the hospital would receive payment for bed use and other support services. Such an arrangement would enhance the reputation of the hospital in addition to providing additional off-budget income.

Insetting prices for all of the various fee-for-service activities, CH1 recognizes that, at a minimum, it should cover the variable costs of the service (e.g., the disposable supplies, chemical reagents). Still, many of the prices now seem able to cover this amount. For enterprise contracts, offering services below variable costs is financially feasible only as long as the municipal budget allocation is sufficient to replenish stocks. For the record, this is not likely to occur in the near future.

Fairly detailed cost data are available for setting future prices for user fee-based services more accurately. The chief economist obtained the information by interviewing the doctors involved. Those physicians, in turn, identified resources they had used to provide the service. An inflation index would be used to update this information regularly.

Chapter 5

GLOBAL BUDGETS AND CAPITATION

5.1 The City's Proposed Approach for Per Capita Global Budgeting

The City of L'viv Health Administration has proposed changing the traditional line item budgets for each of the nonspecialist hospitals and polyclinics to a per capita-based global budget; however, the implementation of this per capita payment method has been put on hold until a more stable economic situation exists in L'viv. Under the proposed system, the City Health Administration would pay each of its specialized health care facilities, such as the psychiatric center or the TB sanatorium, according to its to existing budget. The remaining municipal health care funds would then be distributed among the eight city hospitals and two city polyclinics according to a per capita formula. This formula would use age/sex relative weight statistics obtained from the former USSR (Sheiman, Igor; 1988). These data would reflect the relative costs of providing comprehensive care to various age/sex groups using an international database. For each of the 10 facilities, the demographic characteristics of the populations they serve would be used to calculate the total relative budget weight points for each facility. A budget neutral formula would be used to determine the koupon (Ukrainian currency) value per point and ultimately the payment per capita for each of the facilities. The per capita formula would set the basic minimum budget for each facility. If patients used facilities outside their residential area, the area health care facility would make an interfacility payment to the health care facility actually treating the patient. Determining the mechanisms and amounts for such interfacility payments should prove quite challenging. However, it is absolutely necessary because with free choice it is very likely that patients will begin shopping for the best available health care facilities.

One perceived advantage of this per capita formula for both the health administration and the facilities is that an increase in the transparency with which budgets are allocated. In addition, the budget would be allocated as a global budget, giving the facilities much more flexibility in how they use their money.

From a technical point of view, it is important to realize that this formula uses relative weights that are several years old; that are based on treatment patterns not necessarily applicable to L'viv; and that do not reflect the specific services offered by each of the facilities. The per capita payment depends only on the age/sex characteristics of the population. This may mean that facilities that offer relatively complex services will be underfunded, while facilities offering more basic services should do quite well. However, this problem will be mitigated somewhat by the fact that the specialized health care facilities will not be paid using this per capita formula. Despite of these limitations, the proposed new global budgeting system represents an important step towards giving city health facilities more management and financial autonomy.

5.2 Implementing Global Budgets: The Current Economic Context

Conventional wisdom in L'viv is that from 20 percent to 40 percent of health expenditures under the current system is "wasted." A variety of explanations for why this waste occurs is given by senior health managers. They hope that the shift from a line item budget to a global budget will eliminate some of this waste.

Moreover, because of Ukraine's unpredictable economy, health care revenues are routinely slashed. City Hospital Number One is currently operating on about 40 percent of the promised funds, with a further cut anticipated by July 1st. In fact, the additional cuts cannot be accommodated under existing law and policy. Nevertheless, they are almost certain to be made. The inability to be confident that planned budgets will actually materialize vitiates many of the differences between a global and a line item budget and renders the choice of budgeting base moot.

5.3 Implementing Global Budgets: Per Capita-based Payments

In addition to any presumed effects on budget stability and predictability, per capita funding offers a distinct advantage as a budget base over other likely candidates. This advantages stems from the fact that the population upon which the formula is based is less under management control than contigent on the number of beds, the former basis for the budgeting formula.

The choice of a per capita budgeting base, however superior conceptually, raises some operational difficulties for CH1. More than half of its inpatient beds are committed to city-wide responsibilities in allergy, ENT, and vascular surgery. There are other city and oblast specialty hospitals that serve Shevchenko residents. Other city hospitals in other rayons also have citywide responsibilities; and there is another general city hospital and polyclinic (although small) in the rayon. The major problem CH1 faces is carving out a discrete set of services that it alone is responsible for delivering to a defined population. Because per capita payments would not be closely tied to the type of services rendered by City Hospital Number One, a system of transfer payments between facilities would be required. However, these these transfer payments could well exceed 50 percent of the global budget, raising issues of management continuity and responsibility, as well as placing a great burden on the technical design of such a payment transfer system.

Chapter 6

RECOMMENDATIONS: FINANCIAL ISSUES

There are three important areas of financial concern for City Hospital Number One. The first relates to establishing key aspects of the proposed per capita-based global budget policy. The second deals with opportunities for generating user fees. The third highlights the importance of establishing a solid and useful budget and cost information system.

6.1 Per Capita-based Global Budgets

The City Health Administration should be encouraged to provide more financial and management autonomy to City Hospital Number One, as well as to the other city health facilities. Switching from a line item to a global budget allocation method is an important step towards this end. Despite the limitations of the proposed per capita-based global budget formula discussed in previous sections, the proposed system is a reasonable first step in reducing the number of restrictions on the use of resources created under a line item budget.

Adopting a global budgeting approach, however, only gives the illusion of management flexibility if other constraints limit or prevent action. It is critically important that, along with its new budget allocation formula, City Hospital Number One be given some flexibility in deciding how to use these funds. For example, if all costs are fixed, it is virtually impossible to respond effectively to unexpected shifts in technology; changes in the needs of the service population; or new commercial opportunities by moving resources from one administrative area to another.

Since labor costs account for the largest single portion of costs, substantial improvements could be made in efficiency and effectiveness by increasing flexibility in this area. This is not just a matter of adjusting absolute numbers of employees, but also of being able to adjust job categories and create flexible salary arrangements and incentive programs. Personnel management should be made an explicit focus.

Because City Hospital Number One serves both Shevchenko rayon and the entire city, if it were to operate under a capitation-based global budget there would be substantial amounts of work being done in other hospitals on its assigned population. Conversely, CH1 would be doing substantial amounts of work on patients not in its assigned population. These financial cross-flows need to be kept in mind and some technique of interfacility payments should be developed to compensate the various institutions involved. One option would be to operate a hospital-based "health maintenance organization" (HMO) with an enrolled population that transcended rayon borders. However, this option should only be pursued as a joint venture between the hospital and a large enterprise located in the rayon. Individual enrollment in an HMO would be prohibitively complicated at this early stage of reforms.

Suggested Next Steps:

1. As Ukraine's economic situation stabilizes, implementation of the proposed per capita-based global budgeting system should be initiated on an experimental basis with City Hospital Number One. Along with this shift should come substantial flexibility in the use of allocated funds.

2. Given that this is an experiment, the City Health Administration should share the financial risk with City Hospital Number One by guaranteeing a minimum budget level (in real value) that is not tied to the number of beds, bed-days, or bed occupancy rate. CH1 should be able to keep a large portion of any surplus it generates within the global budget amount. In addition, during the first three to five years, this minimum budget allocation should not be reduced if City Hospital Number One is able to generate other sources of revenue (e.g. user fees, humanitarian assistance). The per capita-based budget formula should be revised annually to ensure the budget allocations more closely match the types of services rendered by each of the city health facilities.

3. City Hospital Number One and the City Health Administration should begin immediately to design a system of interfacility payments to compensate health facilities for delivering services to out-of-area patients. Interfacility payment based on retrospective fee-for-service methods is not recommended since this form of payment usually creates substantial incentives to increase the volume of services.

4. City Hospital Number One should begin to estimate the age- and sex-relative value units for the services it provides to determine the degree to which the City Health Administration per capita formula reflects its own cost patterns. At the same time, City Hospital Number One should experiment with alternative formulas for setting its capitation rate (e.g. actuarial rates for each type of service).

Suggested Indicators of Progress:

1. Implementation of per capita-based global budgeting for City Hospital Number One on an experimental basis.

2. Existence of interfacility payment mechanism.

6.2 User Fees

In light of increasingly diminished government budgets, it is critical that City Hospital Number One diversify its sources of funding. Contracts with enterprises to conduct annual check-ups for employees with hazardous occupations should be expanded to include fees for other tests and treatments, provided the monies earned cover the variable costs incurred when services are rendered (unless other sources of funds are found to cover the variable costs). Already, user fees for selected

services—such as specialized gynecological services, massages, and assistance to families with elderly members—have been proposed. They should be implemented only after it has been verified that revenues earned will cover the variable costs of running such services, and that funding sources for start-up costs have been identified. Additional opportunities to collect user fees should be identified. The Shevchenko rayon, although facing serious economic constraints, appears to have sizeable portions of the population (either individual patients or enterprises on behalf of their employees) who would be able and willing to pay for such services.

City Hospital Number One should select the health care services it will offer for a fee based on the following criteria:

1. The service should have a sufficient number of patients able and willing to pay for it so that, at an absolute minimum, fees charged will cover the unit variable costs of the service.

2. The quality of the health care service can be improved in ways that patients perceive to be important. Proposed quality improvements should require only minimal start-up investment costs. Fixed cost requirements would probably have to be financed from other sources (existing equipment, donations, seed money, bank loans, etc), since it is unlikely that user fee revenues will be large enough to cover large initial investments.

3. The service does not concern critical preventive services, such as immunizations or treatment of communicable diseases.

4. And, finally, fees for hospital services should be higher than those at the polyclinics to encourage patients to use more cost-effective outpatient services. This should include both drugs and treatments. Currently, medicines are free in hospitals but not in polyclinics, a situation that creates a high patient demand to be admitted to the hospital.

Suggested next steps:

1. By interviewing physicians and patients, conducting focus groups and/or small surveys of the community, determine the extent to which patients are able and willing to pay for selected health care services and what quality improvements patients perceive to be important. Emphasis should be placed on those services requested by higher socioeconomic groups.

2. For each proposed fee-for-service, identify the specific quality improvements required and their cost (e.g. purchase of equipment, renovation of treatment areas, increase in stocks of medicine). Prioritize implementation of fees according to those services that require minimal initial investment.

3. Identify and evaluate various sources of funding to cover start-up costs (humanitarian assistance, bank loans, other international organizations).

4. Set prices for these services to at least cover unit variable costs, and, if evidence of sufficient willingness to pay exists, set prices closer to average unit costs to ensure that sufficient funds are available to cover uncollected debt and replace equipment as needed. Prices should be indexed to inflation and changed as frequently as necessary to maintain real values.

5. Set a policy for the use of revenues which ensures that the variable inputs of the particular health care service are paid for. Indicate how additional revenues will be used to pay for performance bonuses and quality improvements. Ensure that the real value of revenues earned is maintained, even during periods of high inflation.

6. Further develop the financial management system to ensure that management of funds is transparent. A regular auditing procedure should be put in place.

7. Regularly generate financial management reports that are useful for day-to-day and strategic decision making. The reports should including the following information:

   (a) the extent to which revenues cover the costs of each type of service provided for a fee;
   (b) the number of patients served by department per day and per month;
   (c) the services performed for each patient and what was paid;
   (d) number of new and repeat patients per day; and
   (e) number of exemptions from payment granted per day and per month.

   To produce this information, patient records should be standardized to list each service performed (diagnostic tests, procedures, other treatments); the department in which the service was performed; the price paid; and patient characteristics (age, sex, occupation or employer). The records could be produced in multiple copies for the doctor, diagnostic and treatment departments, and the cashier.

8. Set policies to guide a local committee in determining who is unable to pay for services.

9. Obtain a waiver for price approval, or expedite the process of obtaining price approval.

10. Explore opportunities for having reputable physicians (e.g. cosmetic surgery and others) work in CH1 in a relationship that brings user benefits to both the physicians and the hospital.

Suggested Indicators of Progress:

1. Cash revenues earned from enterprise contracts (in absolute terms and as a percentage of total revenues and percentage of potential revenues actually collected. List of in-kind payments from enterprise contracts (including estimated value), when relevant.

2. Cash revenues earned for other fee-paid services (in absolute terms and as a percentage of total revenues).
3. Percentage of nonsalary operating costs, especially variable costs, covered by revenues from fee-for-service and enterprise contracts.

4. Use of fee-for-service revenues: variable costs, quality improvements, salary performance bonuses.

5. Number of patients served under user fees according to age, sex, occupation and place of residence, and status of payment (paid, exempt, or unpaid).

6.3 Budget and Cost Management

Budget and cost information is essential for internal management decisions. Senior management should be trained in how such information can be used to support concrete, day-to-day and strategic decisions they face. For example, such information could be used to improve the efficiency with which resources are used, to calculate the amount of costs to be covered by the global budget, and to set fees when implementing user fees or interfacility payments. It will be important to track the comparative costs of selected services that could be provided on either an inpatient or outpatient basis. Eventually, the cost accounting system should be able to be used in conjunction with a patient classification system.

City Hospital Number One and each of its four polyclinics should establish distinct, but integrated budgeting and cost accounting systems. Such financial reporting systems could supplement the existing official accounting requirements. Initially, the budget and cost accounting system should be set up to be done without computers and should have immediate practical application for supporting daily and strategic management decisions. Any future budget and cost accounting software needs to be very user-friendly, and easily modified and updated by local computer consultants.

City Hospital Number One has already developed simple cost accounting information, primarily for the purpose of setting prices. An enhanced cost accounting system should include estimates of the total costs, fixed costs and variable costs for each clinical specialty department and for other organizational units that have the potential for generating their own revenues. The cost accounting method chosen should provide accurate information on a timely and regular basis; however, timeliness of information should have priority over a high level of precision. The cost analysis should be able to track the costs of administration, supporting paraclinic services, and specialty departments, both inpatient and outpatient. Methods of estimating capital depreciation need to be greatly improved.

Suggested next steps:

1. City Hospital Number One should prepare separate budgets its inpatient facility, each of its four polyclinics, each major department, and any other major cost center. These budgets should include all sources of revenue including public, fee-for service, and humanitarian assistance. For each facility and departmental budget, certain performance indicators should be identified (e.g. number of discharges; average length of stay; number of visits; number of tests, procedures or surgeries) to evaluate whether budgets are being used productively. Many of these service statistics are already being collected at the departmental level, but they need to be linked to budget performance.

2. Eventually, methods in 'flexible budgeting' (analytical tools for assessing budget performance) should be adopted to enable managers to analyze reasons for variations in budget performance, especially those due to changes in unit costs, use of inputs, and/or service volume.

3. CH1 needs to demonstrate the use of selected cost accounting methods to compare the costs of a selected service on an inpatient and outpatient basis. (See Annex G work already initiated).

4. The hospital should establish a basic cost accounting framework for the inpatient unit and four polyclinics (identification of cost centers and revenue centers). Although some cost accounting methods are already being used, cost management information needs to be organized more systematically for easy updating and expansion. CH1 should estimate the full, fixed and variable costs of final cost centers for the inpatient unit and four polyclinics.

5. Finally, CH1 needs to create a reporting format that summarizes cost accounting information needed for decision making. The report should highlight information such as comparative costs of selected services rendered on either an inpatient or outpatient basis; comparative information on the composition of costs for each medical specialty; and costs of services appropriate for various payment methods (e.g. per capita, user fees, interfacility payments)

Suggested Indicators of Progress:

1. Availability of separate institutional and, eventually, departmental budget reports for the inpatient unit and each of four polyclinics, and a list of performance indicators for each facility.

2. Availability of cost accounting reports—on a regular basis for each of the institutions mentioned above—and documentation of resulting changes in resource allocation.

3. Trends in institutional and departmental budgets (in real terms) and corresponding performance indicators.

4. Availability of comparative cost data for selected treatments provided on both an inpatient and an outpatient basis. Documentation of decisions about treatment settings based on this information.

5. Documentation of the successful application of cost accounting information for setting prices and interfacility payments.

Chapter 7

RECOMMENDATIONS: INTERNAL MANAGEMENT OPERATIONS

In general terms, global budgeting represents a decentralization of decision making, compared to line item budgeting or budgeting by article or category. This shifting of responsibility from the fundholder to the operating level requires the development of new management skills so that the increased financial flexibility can be turned into improved system performance. These new skills include decision making and decision implementation and involve both enhanced information systems and streamlining of administrative services. The following recommendations focus on improvements in internal organization and management that would boost the ability of City Hospital Number One and its polyclinics to operate under a global budget.

There appear to be two promising means for restructuring the delivery system: enhancing the hospital's ambulatory care capability so that more patients are treated at this level; and reducing the number of beds devoted to general acute care. Together, these changes need note reduce the actual number of beds, as it may be desirable to create more day beds, nursing care beds, etc.

7.1 Organizational Readiness

City Hospital Number One needs to boost its capacity to deliver medical services effectively and efficiently. Again, this may necessitate the reduction of acutely ill patient intakes, while increasing treatment of ambulatory patients. In addition, any organizational barriers between inpatient and outpatient services must be removed.

Suggested next steps:

1. It should be announced as official corporate policy that the integration of inpatient and outpatient activity is an objective and should be encouraged.

2. Every department should be asked to suggest areas and mechanisms for such integration and to identify a means to implement the 'rotational service' concept in the department.

3. A waiver should be sought from the health department(s) indicating that the number of funded beds at City Hospital Number One will not be changed as a result of the occupancy rate. This would provide a financial cushion to the hospital as it experiments with new organizational concepts.

4. Polyclinic- and inpatient-related salary and nonsalary expenditures should be monitored to check progress towards improved integration of services. Targets for each type of expenditure (e.g., medicines, food and nutrition, personnel) in both the inpatient and outpatient settings should be set and progress towards these targets should be tracked.

5. Additional family medicine centers should be started.

6. CH1 could host a short (three-to-five-hour) training session on "Improving the Coordination of Hospital and Polyclinic Services: Medical, Management and Economic Dimensions." The hospital should be prepared to present evidence of its own experience (e.g. general ENT experience, estimates of economic benefits, statistics of improved skills among ENT physicians)

Suggested Indicators of Progress:

1. Expansion of the 'rotational service' concept to additional departments.

2. Consolidation of additional polyclinic and inpatient departments under a single chief doctor, or development of decision making teams across the inpatient-ambulatory boundary.

3. A higher proportion of surgery being done on an outpatient basis.

4. An increasing proportion of budget spent at the polyclinic level.

5. Formation of a group tasked with developing recommendations for the integration of inpatient and outpatient activities.

7.2 Managerial Readiness

As decision making decentralizes to the operating level, through global budgets or some other means, management must be equipped with tools that will allow it to use these new powers to correctly identify and implement decisions that will improve efficiency and effectiveness. Four such tools are discussed below: information systems, treatment rules or protocols, incentives, and bed planning.

7.2.1 Information Systems

Most of the current efforts by health care facilities to collect and analyze health care data involve basic utilization and population-based epidemiology statistics. Moreover, reports are prepared for external audiences such as the Ministry of Health. Information that would allow management to track and guide change is insufficient. CH1's senior management staff would benefit from training that would provide them with skills to determine what kinds of information they should have to guide them in their decision making, and to coordinate production of such information by hospital mid-level managers in an accurate and timely manner.

CH1's new management information systems should integrate two sources: financial and clinical. Clinical information involves patient tracking and provider profiling, so that it can be known what has been done for individual patients and types of patients, and so that the performance of hospitals,

polyclinics, departments, and individual doctors can be memorialized. To make such assessments, it is necessary to define and collect a minimum patient data set and to develop or identify appropriate treatment standards or comparison points.

Ideally, information would be computerized so that it can be readily accessed, analyzed, and used in making decisions. Unfortunately, hardware and software costs currently preclude such a move. Nevertheless, it is recommended that a start be made within resource constraints. A likely point to begin is with the family practice center whose patient care activities are in the process of being computerized.

Suggested next steps:

1. Identify a minimum data set, based on international standards, to be collected for each patient in a single family practice center.

2. Design a patient encounter form to be used after every patient visit.

3. Apply to USAID (or another grant-giving organization) for computer and basic software.

4. Provide staff training in correct completion of patient encounter form and electronic data entry.

5. Establish a management reporting system that (a) monitors the quality of record keeping, and (b) generates necessary information for monitoring the quality and efficiency of patient treatment.

Suggested Indicators of progress:

1. A management report is developed for a family practice center.

2. Medical records routinely include a minimum basic patient data set.

3. A patient encounter form is developed for ambulatory use and a discharge summary is developed for inpatient use.

d. Additional computer capacity is achieved.

e. Core staff members are trained in patient abstracting and data entry techniques.

7.2.2 Clinical Protocols

Clinical protocols are suggested courses of treatment for particular types of patients. Properly used, they can be a useful means of developing consensus within a large organization such as CH1; of reducing variation among its many providers; and of teaching new or different ways of using a health care system. In the present situation at CH1, such uniform treatment models may become very useful when treatment patterns are shifted away from inpatient utilization and toward ambulatory care.

Suggested next steps:

1. Convene a group of CH1 staff members to develop criteria for admission to and discharge from the hospital's inpatient units. Define the task as aimed at minimizing inpatient use.

2. Identify additional investments and training that would be necessary to expand outpatient use.

3. Convene a group of CH1 staff members aimed at defining the conditions under which polyclinic therapists should refer patients to polyclinic specialists, the inpatient unit of City Hospital Number One, or other specialized hospitals in L'viv.

4. Create an initial list of surgeries to be done in the future on an outpatient basis, unless appropriate justification exists for continuing these surgeries on an inpatient basis.

Suggested Indicators of Progress:

1. Reduced level of referrals to the inpatient unit of City Hospital Number One from its polyclinics.

2. Reduced level of referrals from the polyclinic therapists to the polyclinic specialists.

3. Reduced level of referral from the polyclinic to other hospitals in L'viv.

4. Increased ambulatory surgery as a proportion of all surgery.

5. Development of a utilization review and quality assurance function to monitor use and quality.

7.2.3 Incentive Systems

When management fails to recognize and reward superior performance, good employees become demoralized, and the others have little incentive to learn or improve. The presence of functioning incentive systems is particularly critical in periods of organizational change. The performance-based salary incentive work team concept instituted in selected departments of CH1 should be expanded to all hospital employees. The current formula might also be modified to ensure that performance

bonuses are issued only after a minimum level of involvement is demonstrated. For example, during the summer months when polyclinic staff are often not fully utilized due to low patient demand, salaries from unfilled posts could be partially redirected to purchase needed equipment rather than paying the usual bonuses.

In a variation of this concept, salary bonuses could also be used to discourage unnecessary use of the inpatient unit. This would be something like the "gatekeeper" concept of primary care with a group bonus based on a "withhold" that would be used incrementally as inpatient referrals occurred.

Suggested Next Steps

1. The new salary incentive formula should be adjusted to reward health professionals only above a minimum level of physician productivity (number of visits, etc).

2. Efforts should be made to expand the salary incentive program to the entire organization. Necessary permissions should be obtained, along with any legal or regulatory changes believed necessary to implement such a program at CH1.

3. A polyclinic incentive program should be formulated that rewards reduced referrals to the inpatient unit.

4. Departments that include both inpatient and ambulatory components should be formed and rewarded as they develop new ways to shift from inpatient to outpatient treatment.

Suggested Indicators of progress:

1. Development of a hospitalwide salary incentive program.

2. Development of a polyclinicwide salary incentive program that is in part tied to inpatient referrals.

3. Implementation of a modified salary incentive program that takes into account a minimum level of activity (e.g. reduced bonuses during slow summer months).

4. Legal permissions obtained and means developed to implement more flexible salary schedules keyed to performance.

5. Development of a departmentwide program in at least one clinical department that rewards shifts from inpatient to outpatient treatment.

7.2.4 Bed Planning

Hospital beds are costly twice: first, to build; and, second, to use. An important advantage of a capitation-based global budgeting system such as the one we have proposed for CH1 is that it enables bed supply and the use of inpatient beds to become management variables. Money can be saved by retaining beds as a basic budget determinant while allowing occupancy rates to decline.

In any case, Ukraine does not suffer from an excess of hospital beds as much as it does from a failure to distinguish among types of beds (or types of patients and their needs). As a result, all patient acuity levels are blended together and treatment differences become hard to manage, especially in regard to the determination of appropriate staffing levels, supplies, etc.

Suggested next steps:

1. Convene a group of CH1 staff to develop a detailed analysis of current bed use.

2. Using that analysis and associated admissions criteria, attempt to quantify inappropriate use and the reasons for its occurrence.

3. Develop a program that requires a minimum level of inpatient nursing care.

4. Develop a bed utilization review process.

5. Using whatever cost finding techniques have been developed, estimate resource needs and their cost, by type of bed.

Suggested Indicators of Progress:

1. A typology of beds is developed and admissions criteria created tied to patient condition and type of treatment needed.

2. A bed need methodology is created which indicates required numbers of different kinds of beds (acute, nursing level, rehabilitation, hospice, etc.).

3. A hospital planning department is developed to estimate and monitor requirements for beds and personnel, based on the health needs and community characteristics of L'viv city and Shevchenko rayon.

4. A management report is produced that identifies appropriate and inappropriate bed use.

5. The number of acute beds in active service is reduced.

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Annex A

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Annex B

CITY HOSPITAL NUMBER ONE: SERVICE STATISTICS, 1992–1994

City Clinic Hospital Number One - Service Statistics

Department	Number of beds			Planned Bed-days			Occupany rate - planned beddays			Occupancy Rate (U.S. formula)		
	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994
Internal Medicine	80	60	60	27,760	22,555	20,820	97	106.6	104.9	92.26	109.78	99.82
Allergies	60	60	60	20,820	20,820	20,820	104.2	105.6	102.5	99.07	100.43	97.46
Vascular Surgery	60	60	60	20,400	20,400	20,400	97.5	100.5	104.1	90.84	93.57	97.00
Gynecology	60	60	60	20,100	20,100	20,100	103.5	101.8	103.5	95.03	93.42	95.02
Ear, Nose, Throat	60	52	50	16,500	17,160	16,500	98.4	110.5	104.4	73.93	99.91	94.44
Pediatrics	40	0	0	13,680	3,420	0	74	69	0	69.40		
TOTAL	**360**	**292**	**290**	**122,556**	**106,105**	**98,640**	**96.6**		**103.9**			
Check Total	**360**	**292**	**290**	**119,260**	**104,455**	**98,640**						

Department	Discharges			No. of Deaths			Number of bed-days			Average beddays/bed		
	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994
Internal Medicine	1,558	1,404	1,370	26	20	11	26,940	24,042	21,860	336.7	369.9	364.4
Allergies	1,250	1,231	1,252	0	0	0	21,696	21,994	21,343	361.6	366.6	355.7
Vascular Surgery	706	803	1,001	26	14	15	19,893	20,491	21,242	331.5	341.5	354
Gynecology	1,893	2,055	2,578	0	0	0	20,811	20,458	20,810	346.8	340.9	346.8
Ear, Nose, Throat	1,726	1,741	1,637	0	1	0	16,190	18,962	17,235	269.8	346.7	344.7
Pediatrics	654	156	0	0	0	0	10,132	2,363	0	253.3	59	0
TOTAL	**7,787**	**7,390**	**7,841**	**52**	**35**	**26**	**118,456**	**108,310**	**102,490**	**329**	**352.8**	**353.4**
Check Total	**7,787**	**7,390**	**7,838**	**52**	**35**	**26**	**115,662**	**108,310**	**102,490**			

Department	ALOS			Patients under 14			Bed use			Mortality Rate		
	1992	1993	1994	1992	1993	1994	1992	1993	1994	1992	1993	1994
Internal Medicine	17	16.9	15.8	0	0	0	19.8	21.9	23	1.6	1.4	0.7
Allergies	17.3	17.9	17	0	0	0	20.8	20.5	20.8	0	0	0
Vascular Surgery	27.1	25.1	20.9	0	0	0	12.2	13.6	16.9	3.5	1.7	1.4
Gynecology	10.9	10	8	0	0	0	31.5	34.3	42.9	0	0	0
Ear, Nose, Throat	9.3	10.9	10.5	431	362	362	28.7	33.5	32.7	0	0.06	0
Pediatrics	15.4	14.6	0	654	156	0	16.3	4	0	0	0	0
TOTAL	**15.1**	**15.2**	**13**	**1085**	**518**	**362**	**21.7**	**24.2**	**27.1**	**0.6**	**0.47**	**0.3**
Check Total	**16.73292**	**16.70744**	**15.65903**	**1085**	**518**	**362**						

Planned Notes:
Internal Medicine in 1993: reduced beds to 65 and then to 60
ENT in 1993: reduced beds to 60 and then to 52

City Hospital Number One - Polyclinic Services			
Outpatient Visits			
	1992	**1993**	**1994**
total visits	1,106,756	1,162,962	1,077,554
adult visits	601,451	570,359	528,575
child visits	88,722	104,838	92,228
total home visits	157,682	165,809	163,696
home visits - child	74,432	57,022	36,117
home visits- sick calls	55,720	19,555	18,107
Surgical operations			
opthamology	403	1,040	332
ENT	1,438	230	82
ear surgery	26	7	1
vascular surgery	4	6	64
abdominal surgery	7	11	18
hernia surgery	7	11	18
urological/genital surgery	378	1,278	770
female genital surgery	*354*	*1,244*	*766*
bones and muscles	93	16	72
breast surgery	6	4	23
skin surgery	2,420	1,680	1,504
others	1,283	2,975	738
female vacum aspirations	*0*	*0*	*766*
total outpatient surgeries	6,032	5,996	3,603
check total	6,065	7,258	3,622
No. of patients	?	?	3,378
No. of children	?	?	*216*

Annex C

LIST OF MEDICAL FACILITIES WITHIN THE L'VIV CITY HEALTH CARE ADMINISTRATION

Annex D

CITY HOSPITAL NUMBER ONE, SOURCES OF REVENUE, 1992–1994

City Hospital Number One - Source of Funds						
	1992		1993		1994	
	kp 000s	%	kp 000s	%	kp 000s	%
Actual Public Budget	125,558.00	100	3,289,675.60	96	39,154,055.80	99
User fees (enterprises)	106.20	0.08	119,115.70	3.47	239,471.50	0.61
Humanitarian	0.00	0	22,094.10	0.64	106,616.00	0.27
TOTAL SOURCES	125,664.20	100	3,430,885.40	100	39,500,143.30	100

Annex E

CITY HOSPITAL NUMBER ONE BUDGETS, 1992–1994

City Clinic Hospital Number One - Budgets

Approved Expected Budget

Article #	Description	1992		1993		1994	
		k, 000s	%	k, 000s	%	k, 000s	%
1	Salaries	62,142.00	55%	954,500.00	32%	12,575,060.00	35%
2	Social Security	20,000.00	18%	274,000.00	9%	4,356,772.00	12%
3	Supplies	8,207.00	7%	414,500.00	14%	3,286,000.00	9%
4	Travel	9.00	0%	120.00	0%	3,000.00	0%
9	Nutrition	7,220.00	6%	439,290.00	15%	4,351,528.00	12%
10	Medicines	10,645.00	9%	555,000.00	19%	7,163,947.00	20%
12	Equipment	600.00	1%	16,000.00	1%	300,000.00	1%
14	Linens	1,514.70	1%	23,000.00	1%	500,000.00	1%
16	Capital, repair	2,550.00	2%	230,000.00	8%	750,000.00	2%
18	Other	407.00	0%	80,451.30	3%	2,602,200.00	7%
TOTAL	**Total**	**113,296.70**	**100%**	**2,986,861.30**	**100%**	**35,888,507.00**	**100%**

Approved Final Budget

Article #	Description	1992		1993		1994	
		k, 000s	%	k, 000s	%	k, 000s	%
1	Salaries	62,249.20	55%	954,478.40	32%	11,652,329.50	33%
2	Social Security	20,072.50	18%	273,227.50	9%	3,889,353.70	11%
3	Supplies	8,007.50	7%	414,500.00	14%	3,307,950.10	9%
4	Travel	9.20	0%	120.00	0%	10,739.70	0%
9	Nutrition	7,218.80	6%	439,290.00	15%	4,347,701.80	12%
10	Medicines	10,545.70	9%	555,000.00	19%	7,746,421.20	22%
12	Equipment	585.70	1%	16,000.00	1%	211,048.90	1%
14	Linens	1,447.40	1%	23,000.00	1%	199,801.60	1%
16	Capital, repair	2,751.90	2%	230,000.00	8%	1,091,215.00	3%
18	Other	406.80	0%	80,451.30	3%	2,632,003.00	8%
TOTAL	**Total**	**113,294.70**	**100%**	**2,986,861.30**	**100%**	**35,088,504.50**	**100%**

Actual Expenditures

Article #	Description	1992		1993		1994	
		k, 000s	%	k, 000s	%	k, 000s	%
1	Salaries	71,106.30	57%	1,274,886.00	39%	13,249,653.70	34%
2	Social Security	26,309.30	21%	471,707.80	14%	4,902,371.90	13%
3	Supplies	7,211.00	6%	355,361.00	11%	3,218,406.50	8%
4	Travel	9.20	0.00	138.60	0%	10,739.70	0%
9	Nutrition	6,509.10	5%	360,999.90	11%	4,011,927.00	10%
10	Medicines	10,184.00	8%	534,722.80	16%	9,685,551.10	25%
12	Equipment	585.70	0%	16,635.00	1%	211,048.90	1%
14	Linens	1,447.40	1%	22,757.90	1%	199,801.60	1%
16	Capital, repair	1,767.60	1%	194,805.00	6%	949,754.10	2%
18	Other	428.40	0%	57,661.60	2%	2,714,801.30	7%
TOTAL	**Total**	**125,558.00**	**100%**	**3,289,675.60**	**100%**	**39,154,055.80**	**100%**

Annex F

EXAMINING SOME BENEFITS OF ROTATIONAL SERVICES BETWEEN THE HOSPITAL AND THE POLYCLINIC: ENT SERVICES AND SURGICAL SERVICES

Benefit #1. Rotational services may improve the skills of polyclinic physicians because they will assist in providing the more advanced treatments that are performed at the hospital.

To determine if this is true, the following data should be obtained and analyzed:

a. For each physician in the polyclinic ENT department compare the types of surgeries performed before and after the implementation of the ENT circle services. This data will show how many of the polyclinic ENT physicians have assisted in ENT surgeries at the hospital.

Name of physician in polyclinic ENT department	1994: Before ENT Circle Service	1995: After ENT Circle Service	
	Types of polyclinic ENT treatment	Types of polyclinic ENT Treatments	Types of hospital ENT Treatments
1			
2			
?			

b. Ask the ENT head of department for specific examples of how this circle service has improved the level of skills among polyclinic ENT physicians. Specifically, what skills do the polyclinic ENT physicians have that they did not have before?

c. Interview polyclinic patients to determine how many would prefer to have their polyclinic physician continue with their treatment in the hospital's inpatient department.

Benefit #2: Performing simple ENT surgeries or general surgeries in the polyclinic rather than in the hospital will probably save costs.

To determine this, the cost of performing simple surgeries in the polyclinic should be compared with performing the same simple surgeries in the hospital. (In this case, depreciation is not included)

Step 1: Calculate the direct costs of the surgery department in the hospital (salaries, food, nutrition, medicines ...).

Add the indirect costs of the surgery department in the hospital (electricity, water supply, sanitation, housekeeping, ...)

Direct Costs Surgery	+ Indirect Costs Surgery	=	Costs of Surgery Department (without supporting services)

Step 2: Calculate the direct costs and indirect costs for each paraclinic department which supports the surgery department.

Direct Costs Paracl. #1	+ Indirect Costs Paracl. #1	=	Costs of Paraclinic Department #1
Direct Costs Paracl. #2	+ Indirect Costs Paracl. #2	=	Costs of Paraclinic Department #2

Repeat this step for each paraclinic which supports the surgery department

Step 3: For each paraclinic, determine what percentage of its total costs should be allocated to the surgery department. If possible, use a numerical allocation base to calculate this percentage.

Costs of Paraclinic #1	x	% for surgery	=	Paraclinic #1 costs for surgery
Costs of Paraclinic #2	x	% for surgery	=	Paraclinic #2 costs for surgery

Step 4: Find the total costs of running the hospital's surgery department by adding together the above sums and then adding administrative costs.

	Costs of Surgery Department (without supporting services)
+	Paraclinic #1 costs for surgery
+	Paraclinic #2 costs for surgery
+	Administrative costs (8%)
=	Complete costs for the surgery department

Step 5: Calculate a relative intensity of work for each type of operation performed by the surgery department. Perhaps this could be based on the bed days (average length of stay) for each type of surgery, where each operation is given a weight based on the average length of stay.

Total points for all surgeries = work intensity points x no. of all surgeries (for each type of surgery)

Intensity points / simple surgery = total points for simple surgeries / total number of simple surgeries

Step 6: Calculate the cost per point for all surgeries and for simple surgeries:

Cost per intensity point = Complete costs for the surgery department / Total work points in surgery department

Cost per simple surgery inpatient dept. = Cost per intensity point x Intensity points, simple surgery

Step 7: Steps one through five can be recalculated for the polyclinic surgery department.

Since the polyclinic only does simple surgeries, calculate:

Cost per simple surgery in polyclinic = Complete costs for the surgery department / No. of surgeries in polyclinic

Step 8: Compare estimates to see if the following statement is true:

Cost per simple surgery in polyclinic < Cost per simple treatment in inpatient department

Benefit #3: Circle services can encourage Shevchenko patients to use City Hospital #1 as their inpatient facility. In these cases City Hospital #1 will not have to make inter-facility payments to other facilities. (If Shevchenko patients choose not to use City Hospital #1, City Hospital #1 will have to make inter-facility payments to the facility that the patient chooses if it is outside of Shevchenko. This will reduce City Hospital #1's budget.)

To estimate the financial benefit of keeping patients at City Hospital #1, calculate the number of patients in ENT polyclinic who were referred to the inpatient department of City Hospital #1 for operations.

number of operations referred to inpatient department
X
cost per operation
Amount of inter-facility payment (if patient went to another facility)

Benefit #4: Integration of outpatient and inpatient services can produce cost savings by eliminating the number of patients who receive duplicate diagnostic tests.

Step 1: Record the number of patients who receive duplicate tests (and specify the type of tests)

Step 2: Estimate the costs of each type of test

Step 3: Estimate the cost savings that can be achieved by performing only one set of tests on patients listed in Step 1.

Annex G

TRIP ITINERARY

May 16
Arrival of Wouters and Wilson to L'viv

May 17
Annemarie Wouters, Peter Wilson and Boris Uspensky spent the day discussing the scope of work, including approaches to both its technical and training aspects. Uspensky informed the Abt team that work could not formally begin until the Memorandum of Understanding between AID and L'viv Oblast Health Administration was signed. The L'viv City Health Administrator, Dr. Borisevich, was particularly concerned that this formal step be completed before beginning any work in City Hospital Number One. This document had been drafted and tentatively approved by Dr. Khobzey, Administrative Director of the Oblast Health Administration, and was currently in AID/Kiev awaiting proper signatures. AID/Kiev indicated that the signed document would soon be forthcoming. The Abt team had expected to begin data collection and conduct initial facility visits during the period May 17–19, but these activities had to be postponed until the following week.

May 18
Wouters, Wilson and Uspensky finalized materials (overheads and handouts) for the training sessions. Wouters discussed the data requirements for the proposed June 1995 activity on per capita-based rayon-level budget analysis with Uspensky. She then developed a plan to collect and translate most of the required data by June 2nd, in time to be used by Abt consultants for preliminary analysis before conducting the proposed field activity.

At this point, the Memorandum of Understanding was still unsigned. Uspensky asked Nicole Simmons to call Dr. Borisevich to explain that the Memorandum would soon be signed and to encourage him to permit the work by the Abt team to begin. Dr. Borisevich agreed to meet with the Abt team the next day.

May 19
Wouters, Wilson and Uspensky met with Dr. Borisevich. He reiterated his concern for having a signed Memorandum of Understanding as soon as possible. He explained that this document was critical for obtaining the necessary political support from the oblast and city governments. The phone call from Simmons seemed to reassure him that this process was well underway and he agreed to let the Abt team begin working with City Hospital Number One on Monday, May 22. The team reviewed with him the proposed activities, including training. Dr. Borisevich asked for a copy of the scope of work, another document he felt was needed to have to obtain political support for the project. Ideally, the city health administrator would have liked to have a scope of work for each separate part of the project, but the team explained that this was not a typical procedure. Eventually, he agreed that having a written scope of work for the whole project would be sufficient. The Abt

team then provided him with a copy of the descriptive portion of the task order covering the objectives and scope of work.

May 20–21
Wouters and Wilson worked on training materials on Saturday and took Sunday off.

May 22
The team met with Dr. Khobzey, Administrative Director of the Oblast Health Administration, to briefly review the proposed activity, the training and the process for obtaining the Memorandum of Understanding. Dr. Khobzey stated that the oblast would prepare its own official order for the activity related to City Hospital Number One while waiting for the MOU to be signed. He said local counterparts would require such an order to participate in ZRP activities. He also stated that the proposed activity was consistent with previous discussions about the IDS strategic plan and that the Abt team should begin its work. He assigned his deputy, Mrs. Nadia Melnyk, to provide any further assistance on behalf of the Oblast Health Administration.

The team met with Dr. Borisevich and senior staff of City Hospital Number One, including Dr. Jafarova and Mrs. Bichenko, to officially launch the activity. Dr. Jafarova mentioned that, during the previous week, she had obtained an official letter from Ukrainian Deputy Minister of Health, Dr. Yurchenko, permitting City Hospital Number One to undertake experiments in new payment methods. This letter finally reassured Dr. Borisevich that there was political support for the activity in Kiev.

After Dr. Borisevich left, Wouters, Wilson, and Uspensky continued with a more in-depth discussion, with Jafarova and Bichenko, of how the scope of work would be carried out.

May 23–24
Wouters, Wilson and Uspensky conducted in-depth interviews with senior management of City Hospital Number One and its two adult polyclinics. Baseline data collection was also begun.

May 25–26
Wouters and Wilson presented five hours of training related to financing, organization, and management under global budgeting and per capita based payment methods. About 25 people from the city health administration, Zhovkva and Skolie pilot facilities, the L'viv Polyclinic #2 pilot facility, the Oblast Clinical Hospital, City Hospital Number One and L'viv Medical University, attended the training, which took place for two-to-three hours each morning. In the afternoons, the Abt team had hoped to continue meeting with CH1's senior management staff, but their schedules would not permit it.

The Memorandum of Understanding was received from AID. Uspensky delivered it to Dr. Khobzey for review and signing.

On May 25th, Harbick, Uspensky, Ruslan (interpreter), and Hauslohner appeared on the 8:30 local television news. They were interviewed about the ZRP program in general and about Hauslohner's seminar on proposed privatization of Ukraine's pharmaceuticals industry.

May 27–28
Over the weekend, Wouters and Wilson began preparing this draft report.

May 29

Wouters and Wilson met with Mr. Oulan, Chief Economist of the City Health Administration, to discuss the flow of public funds from the national, oblast, and municipal levels to City Hospital Number One. The proposed per capita payment system for the city's health care facilities was also discussed. It appears, that although some details have been worked out (preliminary calculations, legal documents for CH1), the city government is waiting for the arrival of more stable economic conditions before launching any new payment methods. Oulan invited the team to come to his office on Wednesday to get a better explanation of the proposed per capita calculations.

In the afternoon, Wilson continued working on the draft report. Wouters met with Jafarova, Bichenko and Bichenko's assistant to clarify all fee-for-services currently underway or proposed. Wouters also confirmed Jafarova's request that Wouters continue working with CH1 through June 7th, rather than leaving with Wilson on June 2nd, as planned.

May 30
Wouters and Wilson worked on the draft report in the morning. In the afternoon, Wouters met with Bichenko to discuss pricing policies for all proposed user fee services. The team prepared an executive summary of recommendations to be translated and then discussed with CH1 staff on Thursday afternoon.

May 31
Wouters met with Oulan and Bichenko to discuss the proposed per capita calculations in more detail. It proved to be a very valuable meeting in which many details of the per capita proposal including mathematical formulas and budget issues, were explained.

In the afternoon, Wouters and Wilson continued to work on the draft report.

June 1
Wilson gave a lecture on the "General Principles of Bed Planning" at L'viv Medical University. His talk, given at the invitation of Dr. Basilevich, was attended by about two dozen people.

In the afternoon, the team debriefed senior management at CH1 (Bichenko and Jafarova). Each of the recommendations was explained, along with suggested next steps. Jafarova expressed interest in several of the team's recommendations and promised to list her own priorities, which Wouters would then present to Harbick.

June 2
Wilson departed for Washington. Wouters continued to work with Bichenko on using cost accounting methods to estimate comparative costs of surgery performed on an inpatient, versus an outpatient, basis. Jafarova had indicated she would like to use such information in a presentation to the City Rada.

June 3–4
Wouters continued to work on the technical report.

June 5–6
Wouters continued to work with Bichenko on costing methodologies.

June 7
Wouters departed for Washington.

Annex H

GLOBAL BUDGETING AND CAPITATION
FINANCE AND MANAGEMENT ISSUES: TEACHING OUTLINE

Annex I

TRAINING IN GLOBAL BUDGETING AND CAPITATION: ISSUES IN FINANCING, ORGANIZATION AND MANAGEMENT CITY HOSPITAL NUMBER ONE, MAY 25–26, 1995

1. Recent trends and lessons learned about per capita funding in the U.S.
2. Global budgets: concepts and applications.
3. Per capita funding for a health care facility: concepts and applications.
4. Per capita funding for a health care facility: required changes in facility organizations and operations.
5. Tools for determining the appropriate capacity of a health care facility.

Annex J

SCOPE OF WORK
L'viv: GLOBAL BUDGETING FOR CITY HOSPITAL NUMBER ONE

(A) Two U.S.-based consultants from Abt Associates, Inc. will travel to Ukraine to provide technical assistance and training to lay the groundwork for the experiment in global budgeting being undertaken by City Hospital Number One. Specific steps in the work are:

(1) Compile a detailed description of L'viv City's proposal to pay City Hospital Number One and related polyclinics according to a capitation-based global budgeting scheme, utilizing such features as rate setting procedures, proposed benefits covered, payment for services not covered, and legal requirements.

(2) Gather baseline data for use by City Hospital Number One and associated polyclinics on health infrastructure, service statistics, sociodemographic characteristics of population in coverage area and of patients served, budgets and revenues, basic costs, legal and management policies.

(3) Assess the readiness of City Hospital Number One for a global budgeting system in terms of (i) adequate patient record systems, (ii) capacity to track resources used for particular types of care, (iii) availability and use of clinical 'protocols' or norms, (iv) capacity to use case mix monitoring systems, (v) presence and use of costs accounting and other methods to track resources and set prices, (vi) flexible budget reporting (vii) appropriate contracting mechanisms between physicians, the hospital, and polyclinics, to enable accurate tracking of costs and to assure continuity of care, (viii) capacity for utilization management, and, finally, (ix) financial mechanisms to absorb losses from catastrophic cases.

(4) Provide introductory training about basic concepts in hospital-based global budgeting systems to small group of senior management staff of City Hospital Number One and key City Health officials.

(5) Prepare a strategic plan for preparing City Hospital Number One and associated polyclinics to function under a global budgeting system.

(B) Zdrav*Reform* L'viv staff will brief counterparts on the strategic plan and provide technical assistance to City Hospital Number One on its implementation.

(C) Technical assistance will also be provided to City Hospital Number One and the City Health Department staff in evaluating preliminary results of the global budgeting experiment.

(1) In collaboration with counterparts, an evaluation report will be prepared.

(2) Counterparts will be briefed on the results of the evaluation.

(3) Through oral briefings and dissemination of written reports, results of the evaluation will be disseminated to other interested parties throughout Ukraine.